

REMARKS

In the Office Action of March 2, 2004, claims 1-6 stand rejected under 35 U.S.C. §102(b), as being anticipated by U.S. Patent No. 3,957,460 to Lee ("Lee"). Claims 1-6 stand rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 4,244,706 to Forney et al. ("Forney"). Finally, claim 4 stands rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Lee.

In the specification, the paragraph beginning at page 9, line 6 has been amended to replace the terms "clean gas exits" with "ammonia and dust exit." Support for this amendment is found in the specification at page 9, lines 4-11, which state that ammonia and a trace amount of remaining dust are removed with water shower 16, and the clean gas exits via line 17. The gas cleaned with water is transferred to acidic gas absorber 19 via line 18. It is clear that a gas exits via line 18, and a liquid exits via line 17. In addition, Applicant has amended Figure 1 to delete numerals 6 and 7 at the right side of gasification reactor 8. A replacement sheet is submitted herewith as an attachment.

In response to the Examiner's rejections, Applicant has amended claim 1 to more clearly point out the present invention. Support for the amended terms "gaseous oxygen or air is fed to the gasification reactor" is found in the specification at page 7, lines 12-14. Support for the amended terms "the slurry of coal in water is heated to thereby vaporize at least a part of the water" is found in the specification at page 7, lines 10-12. Support for the amended terms "where the coal is subjected to partial oxidation and steam reforming" is found in the specification at page 8, lines 3-7. Lastly, support for the amended terms "a gasification gas and a slag thus formed are withdrawn separately from the gasification reactor" is found in the specification at page 8, lines 24-27, which state that slag is discharged via line 9 of the

gasification reactor 8, whereas gasification gas is discharged via line 10 of the gasification reactor 8.

Accordingly, the amendment being made to claim 1 is supported by the specification. Applicant has also amended claims 3, 4, and 6 to be more consistent with the amendment to claim 1. Claims 3 and 5 has been amended to improve syntax, and therefore the scope of these claims remains unaltered. No new mater is added. Entry of the amendments to claims 1 and 3-6 is accordingly in order and is respectfully requested.

Rejection of claims under 35 U.S.C. §102(b)

Referring to page 3 of the action, claims 1-3 and 5-6 stand rejected under 35 U.S.C. §102(b), as being anticipated by Lee.

The present application discloses a method for the gasification of coal. Claim 1, as amended, now recites that the coal is fed as a slurry in water to the gasification reactor. Gaseous oxygen or air is then fed to the gasification reactor where the coal is subjected to partial oxidation and steam reforming. Thus, it is clear that neither oxygen nor air is supplied until it is fed in the gasifier. Lastly, the gasification gas and slag formed are withdrawn separately from the gasification reactor. The gas is withdrawn from the top of the gasification reactor, whereas the slag is withdrawn from the bottom of the gasification reactor. See column 8, lines 24-25.

To the contrary, with reference to the drawing, Lee discloses a process for feeding carbonaceous solids to a hydrogasification reactor wherein the char and ash obtained by reacting coal with hydrogen-containing gas fall from the hydrogasifier 5 into gasifier 9 and are contacted with oxygen and steam to generate hydrogen, which flows through line 10 into the hydrogasifier. Thus, steam is fed to the gasifier 9 separately from the char and ash. Char is fed to the gasifier 9, but coal is not fed to the gasifier 9. See Lee column 3, lines 34-37. Furthermore, water is

introduced with the coal in the hydrogasifier 5. The water is then completely evaporated in the top section 4 of the hydrogasifier 5 since the water cannot be fed together with the char in the gasifier 9. See Lee column 3, lines 15-22.

In the present invention, coal is fed as a slurry in water to the gasification reactor. One skilled in the art will clearly see that Lee does not disclose this limitation required in claim 1 of the present application. Therefore, claim 1 is respectfully submitted to be patentable over Lee, as are claims 2, 3, 5, and 6, which directly depend from claim 1 and further limit the subject matter being claimed therein. Withdrawal of the rejection of claims 1-3 and 5-6 is respectfully requested.

In addition, claims 1-6 have been rejected under 35 U.S.C. §102(b) as being anticipated by Forney et al. Applicant respectfully submits that claim 1 is patentable over Forney. Forney discloses a process for gasifying carbonaceous material from a recycled condensate slurry. With reference to the Figure of Forney, the preheated oxygen-containing gas 23 is injected into the slurry flow 25 of a carbonaceous material in water. The slurry with the oxygen-containing gas is heated by a heat exchanger 27, whereby the water is vaporized and the carbonaceous material combusts. Subsequently, the resulting gas-solids mixture 31 is fed into the gasifier 35. See Forney column 3, lines 12-49. Finally, the gas-solids mixture 31 containing product gas and reacted carbonaceous material or char is withdrawn from the top of the gasifier 35 and passed to a filter bed vessel 41. See Forney column 2, lines 25-33.

As stated above, in the present invention, oxygen or air is not supplied until it is fed in the gasifier. Furthermore, in the present invention, only gas is withdrawn from the top of the gasification reactor. One skilled in the art will clearly see that Forney does not disclose Applicant's claimed limitations. Consequently, claim 1 is submitted to be patentable over

Forney, as are dependent claims 2-6, which either directly or indirectly depend from claim 1 and further limit the subject matter claimed therein. Withdrawal of the rejection of claims 1-6 is respectfully requested.

Finally, referring to page 5 of the action, claim 4 has been rejected as anticipated by Lee. For similar reasons given above, claim 4 is respectfully submitted to be patentable over Lee. Lee does not disclose a required limitation of claim 1, namely that the coal is fed as slurry in water to the gasification reactor. Therefore, as claim 4 indirectly depends from claim 1, withdrawal of the rejection of claim 4 is respectfully requested.

Accordingly, neither Lee nor Forney discloses Applicant's claimed invention since the references do not require all of the limitations set forth in claim 1 of the present application. Consequently, Applicant submits that amended claim 1 is not anticipated by either Lee or Forney. Dependent claims 2-6, all ultimately dependent on claim 1, are submitted to be patentable as further limiting the allowable subject matter claimed in claim 1. Withdrawal of the rejection of claims 1-6 is respectfully requested.

Rejection of claim 4 under 35 U.S.C. 103(a)

Claim 4 has been rejected as being obvious over Lee. In response, Applicant respectfully submits that Lee neither teaches nor suggests the invention set forth in claim 1. As stated previously, claim 1 requires that the coal is fed as a slurry in water to the gasification reactor. Lee fails to teach or suggest this limitation. Thus, as Lee does not render claim 1 *prima facie* obvious, withdrawal of the rejection of claim 4, ultimately dependent from claim 1, is respectfully requested.

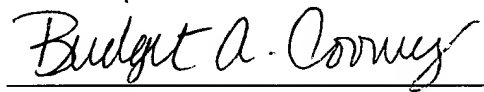
In view of the above, Applicant respectfully submits that the application is in condition for allowance which action is earnestly solicited. If for any reason the application is not deemed

in condition for allowance, the Examiner is respectfully requested to contact the undersigned attorney so that additional amendments may be entered as necessary.

Applicant has enclosed a check in the amount of \$950.00 for the three month extension.

If any additional fees are due, please charge such sums to our Deposit Account 50-1145.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Lindsay S. Adams", written over a horizontal line.

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Amendments to the Drawings

The attached sheet includes changes to Figure 1 and therefore replaces the original sheet containing Figure 1. In Figure 1, numerals 6 and 7 at the right side of gasification reactor 8 have been deleted.

Attachment: Replacement Sheet